

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

REVISED VERSION

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
12 December 2002 (12.12.2002)

PCT

(10) International Publication Number  
WO 02/100050 A1

(51) International Patent Classification<sup>7</sup>: H04L 12/56

(81) Designated States (*national*): CN, JP, US.

(21) International Application Number: PCT/KR01/00934

Published:  
— with international search report

(22) International Filing Date: 1 June 2001 (01.06.2001)

(25) Filing Language: English

(88) Date of publication of the revised international search report: 15 May 2003

(26) Publication Language: English

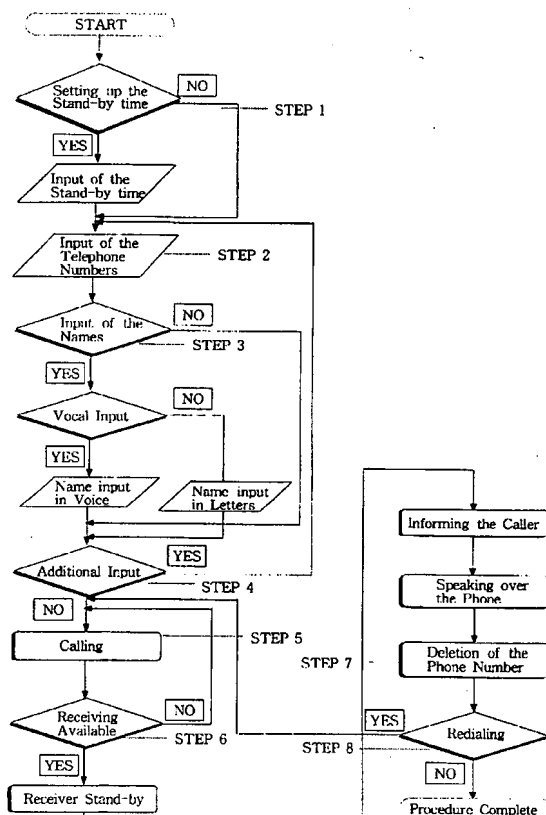
(71) Applicants and


(15) Information about Correction:  
see PCT Gazette No. 20/2003 of 15 May 2003, Section II

(72) Inventors: JUN, Hyung-Sung [KR/KR]; 2-4, Youm-Sung-Ri, YoumChi-Eub, A-San 336-812 (KR). YANG, Hae-Sool [KR/KR]; 101/405 SinRa Apt., 424-9 Sae-Gyo-Ri, BeBang-Myun, A-San 336-855 (KR).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AUTO REDIALING & CALL-RECEIVABLE PERSON NOTIFYING DEVICE



|   |   |   |
|---|---|---|
| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br><br>IPC7 H04L 12/56<br>According to International Patent Classification (IPC) or to both national classification and IPC  |   |   |
| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br>H04L 12/56<br><br>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched<br>Korean patents and applications for inventions since 1975<br>Korean utility models and applications for utility models since 1975<br><br>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)<br>http://ep.sepacenet.com(Worldwide search in the European Patent Office), "Redial Table" or "Redial Available"<br>IEEE/IEE Electronic library(since 1988), "Redial and (Table or Available)" |   |   |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>   |   |   |
| Category*   | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.   |
| Y   | KR 93-11388 A (SAMSUNG ELECTRONICS CO LTD) 04 December 1993 (04.12.1993)  | 2   |
| Y   | US 4,602,128 A (AT&T INFORMATION SYSTEMS INC) 22 July 1986 (22.07.1986)   | 2   |
| Y   | WO 0108400 A (CONEXANT SYSTEMS INC) 01 February 2001 (01.02.2001)   | 2   |
| Y   | US 4,860,349 A (NORTHERN TELECOM LTD), 22 August 1989 (22.08.1989)  | 2   |
| Y   | WO 0048411 A (QUALCOMM INC) 17 August 2000 (17.08.2000)   | 2   |
| Y   | On the retrial and redial phenomena in GSM networks<br>Onur, E.; Delic, H.; Ersoy, C.; Caglayan, M.U.<br>Wireless Communications and Networking Conference, 2000. WCNC. 2000 IEEE<br>Published: 2000<br>Volume: 2, Pages: 885-889 | 2   |
| <input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.   |   |   |
| <p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>   |   | <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p> |
| Date of the actual completion of the international search<br>28 JUNE 2001 (28.06.2001)  |   | Date of mailing of the international search report<br>29 JUNE 2001 (29.06.2001)   |
| Name and mailing address of the ISA/KR<br>Korean Intellectual Property Office<br>Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon<br>Metropolitan City 302-701, Republic of Korea<br>Facsimile No. 82-42-472-7140   |   | Authorized officer<br>KIM, Beom Yong<br>Telephone No. 82-42-481-5684<br>   |



② Input the telephone numbers of the receivers.

③ Input the names of the receivers.

- If the name is called or showed, the caller could easily identify the receiver.

5       - The caller can input the names in voice or in letters.  
      It's optional.

④ Repeat the step ②~③ for another number.

- Stand-by time is fixed in the process, so no alteration is needed.

10       ⑤ Start the Auto-Redialing System.

**※ References**

① Stand-by time for redialing, telephone numbers, and names can be added, deleted, or modified at any stage.

15       ② After the auto-redialing, the signal stops and the message is dispatched. The message is for the receiver to press an appointed button for connection.

20       ③ If the names are recorded in a voice, the caller will hear the recorded voice when connected with the receiver. If they are inserted in letters, the screen will show the names with an alarming sound.

④ If the call is done, the number will be deleted from the list.

**Industrial Applicability:**

25       The system would be of great use in companies such as financial firms where lots of calls are made. Individuals would also make good use of the system. The efficacy of the device can be categorized in three parts.

First, the system can save time on calling. It dials for itself and connect the caller and the receiver.

Second, the caller can go on with other works while the device is on calling. The caller needs not put aside works for calls.

Third, the users can easily access to the system because they are used to operating computers, especially in 'Graphic User Interface(GUI)' environment. Since the program 'DOURI' is run on the Windows, the users will be able to put the data in through the Windows.

Fourth, the system reduces the uneasiness of the callers. When they have a lot of calls to make and have much work to do at the same time, making calls could be a burden. So, if they use this system, they can maximize the efficiency of the work.

**[Claims]**

1. On the operation of the system utilizing software 'DOURI' based on 'Switch network' and 'Packet network', The caller sets up the stand-by time with 'DOURI' in step 1 of figure 2,

5 and puts in the telephone number in step 2 of figure 2. In step 3 of figure 2, the caller inputs the name in voice or in letter.

For more numbers, the caller repeats step 2 and 3 of figure 2.

10 Through the procedures given above, the system detects the call-receivable person and informs the caller.

2. In Claim 1, the detection and notifying of the call-receivable person are achieved right after the signals cease,

15 A message is announced to the receiver and the receiver presses an appointed button in the next step,

Then, the system detects the signals from the phone button,

20 And when the signals are proved appropriate, the system informs the caller with a message in voice or letter.

In operating the system, the notifying function works through the first three input steps,

And the detecting system dials the next number on the list if the signals are not from the appointed button.

Fig.1

[Drawings]

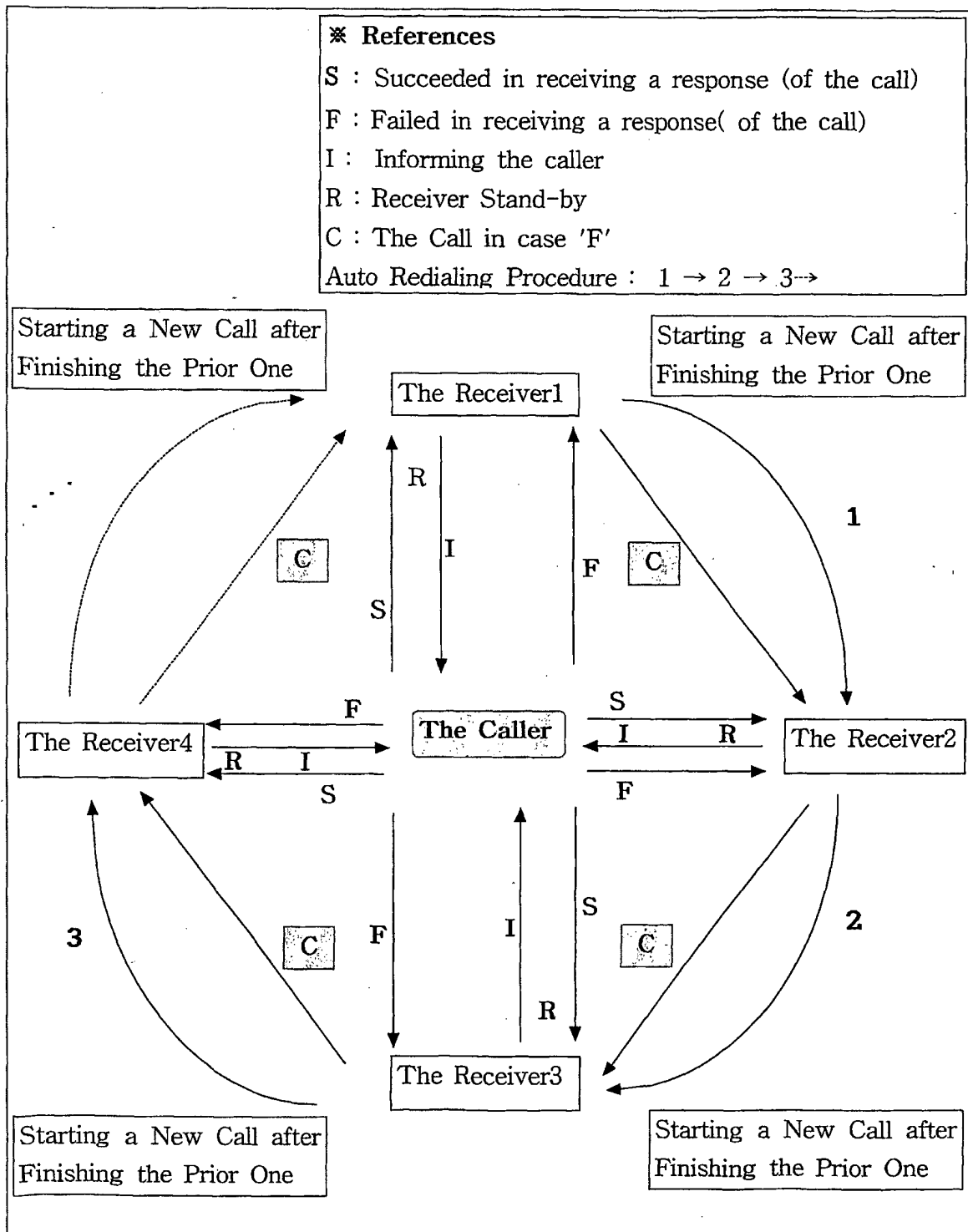
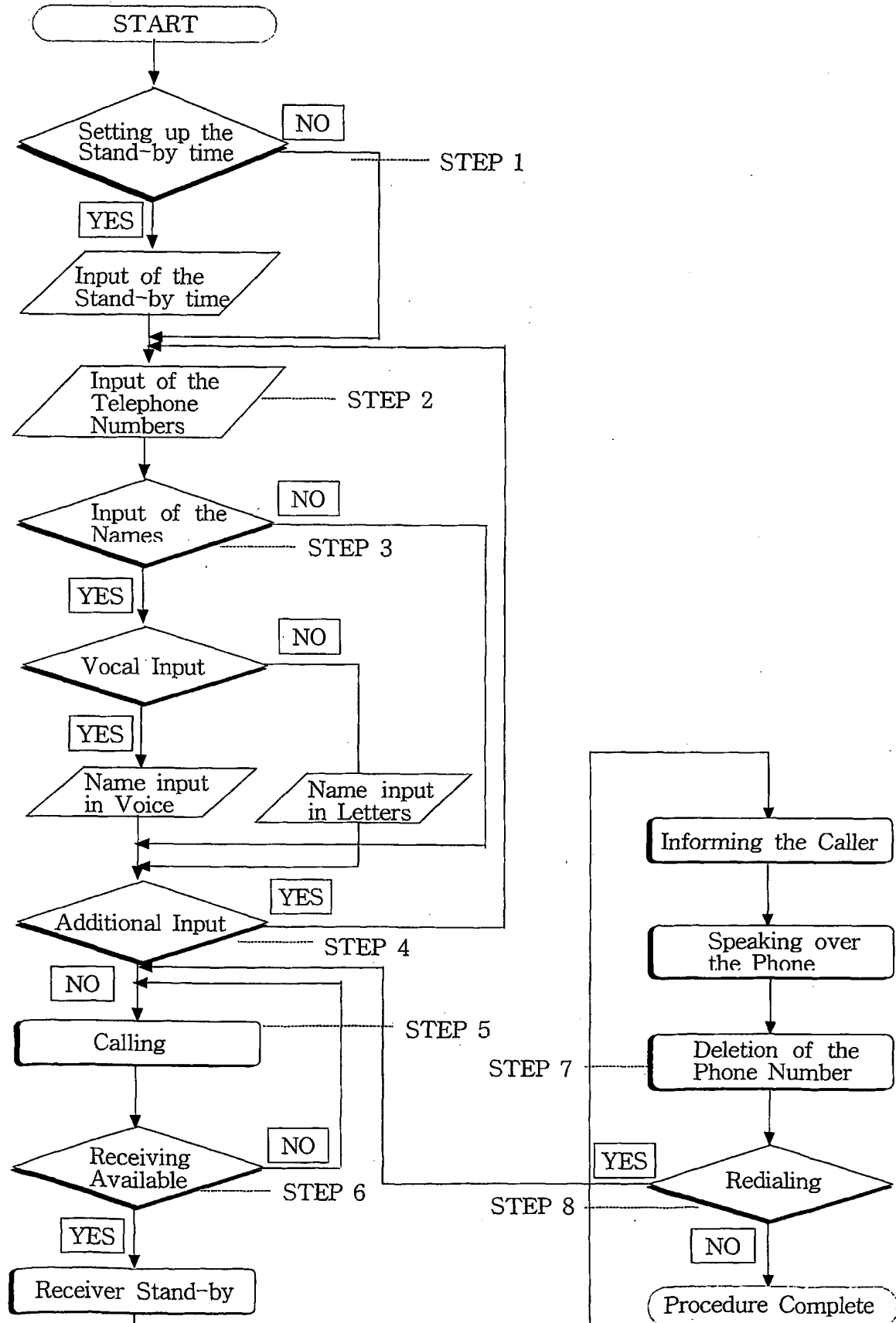


Fig.2





## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR01/00934**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H04L 12/56**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H04L 12/56

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean patents and applications for inventions since 1975

Korean utility models and applications for utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

http://ep.sepatent.com(Worldwide search in the European Patent Office), "Redial Table" or "Redial Available"

IEEE/IEE Electronic library(since 1988), "Redial and Table or Available"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| Y         | KR 93-11388 A (SAMSUNG ELECTRONICS CO LTD) 04 December 1993 (04.12.1993)  | 2                     |
| Y         | US 4,602,128 A (AT&T INFORMATION SYSTEMS INC) 22 July 1986 (22.07.1986)   | 2                     |
| Y         | WO 0108400 A (CONEXANT SYSTEMS INC) 01 February 2001 (01.02.2001)   | 2                     |
| Y         | US 4,860,349 A (NORTHERN TELECOM LTD) 22 August 1989 (22.08.1989)   | 2                     |
| Y         | WO 0048411 A (QUALCOMM INC) 17 August 2000 (17.08.2000)   | 2                     |
| Y         | On the retrieval and redial phenomena in GSM networks<br>Onur, B.; Delic, H.; Ersoy, C.; Caglayan, M.U.<br>Wireless Communications and Networking Conference, 2000. WCNC. 2000 IEEE<br>Published: 2000<br>Volume: 2, Pages: 885-889 | 2                     |

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex

|   |  |
|---|--|
| * Special categories of cited documents:  | * "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  |
| "A" document defining the general state of the art which is not considered to be of particular relevance  | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone   |
| "E" earlier application or patent but published on or after the international filing date   | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) | "&" document member of the same patent family  |
| "O" document referring to an oral disclosure, use, exhibition or other means  |  |
| "P" document published prior to the international filing date but later than the priority date claimed  |  |

Date of the actual completion of the international search

28 JUNE 2001 (28.06.2001)

Date of mailing of the international search report

29 JUNE 2001 (29.06.2001)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon  
Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Beom Yong

Telephone No. 82-42-481-5684

